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AMENDMENT AND RESPONSE

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| Attorney Docket | CLON-017US1 |
| First Named Inventor | Chenchik et al. |
| Application Number | 09/752,293 |
| Filing Date | December 28, 2000 |
| Group Art Unit | 1634 |
| Examiner Name | S. Zitomer |
| Title | <i>Nucleic Acid Assays Employing Universal Arrays</i> |

Sir:

In response to the Office Action dated January 29, 2002, the Examiner is requested to enter the following amendments:

AMENDMENTS

IN THE CLAIMS:

1. (Amended) A hybridization assay comprising the steps of:
- generating a population of tagged target nucleic acids from an initial sample of nucleic acids with a collection of at least 20 tagged gene specific primers;
 - contacting said population of tagged target nucleic acids with an array of tag complements immobilized on a solid support, wherein each member of said population of tagged target nucleic acids has a tag domain that is known to be a complement of a tag complement of said array; and
 - detecting any resultant hybridization complexes on said array.

Cancel Claim 6.

A₂
7. (Amended) The hybridization assay according to Claim 1, wherein the magnitude of any difference in hybridization efficiency between any two tag-tag complement pairs employed in said assay does not exceed about 5 fold.

A₃
11. (Amended) The hybridization assay according to Claim 1, wherein said initial nucleic acid sample is a ribonucleic acid sample.

12. (Amended) The hybridization assay according to Claim 1, wherein said assay comprises generating labeled, tagged target nucleic acids from at least two distinct initial nucleic acid samples.

13. (Amended) A kit for use in a hybridization assay, said kit comprising:
(a) an array of distinct tag complements immobilized on the surface of a solid support;
(b) a set of at least about 20 distinct tagged gene specific primers, wherein each member of said set includes a tag domain that is known to be a complement of a tag complement of said array; and
(c) means for identifying the physical location on said array to which each distinct tagged gene specific primer hybridizes.

A₄
Cancel Claim 14.

19. (Amended) An array of distinct tag complements immobilized on a solid support, wherein said tag complements are members of a collection of tag-tag complement pairs in which the magnitude of any difference in hybridization efficiency between any two tag-tag complement pairs in said collection does not exceed about 10 fold, and at least one of said tag complements is hybridized to tagged target nucleic acid.

A₅
Cancel Claim 20.

Cancel Claim 22.

~~Cancel Claim 23.~~

~~Cancel Claim 24.~~

~~Cancel Claim 25.~~

REMARKS

In view of the above amendments and the following remarks, the Examiner is respectfully requested to withdraw the rejections and allow Claims 1-5, 7-13, 15-19 and 21, the only claims pending and currently under examination in this application following entry of the above amendments.

The Examiner is thanked for the courteous and helpful interview which was held on March 27, 2002. During the interview, the above amendments were discussed in view of the 112 and 102/103 rejections raised in the office action, and agreement was reached that the above amendments would overcome all of the rejections made in the first office action.

The method claims were amended to further clarify the claimed invention, primarily by clarifying the claim language and/or incorporating dependent claims into the independent claims from which they depend and correspondingly canceling the incorporated dependent claims. In addition, the claims were amended to clarify that relationship between the tags on the set of tagged target nucleic acids and the tag complements of the array. Finally, the array claim was amended to specify that at least one of the tag complements of the array is hybridized to a tagged target nucleic acid. The attached marked up version is captioned, "Version With Markings To Show Changes Made." As the above amendments find support in the specification, they introduce no new matter and their entry by the Examiner is respectfully requested.

Claims 1-25 were first rejected under 35 U.S.C. § 112, 2nd ¶ for a number of issues. It is believed that the above amendments address each of the issues raised by the Examiner and that this rejection may be withdrawn.

Claims 1-2, 5, 6 and 11 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Brenner. As discussed and agreed by the Examiner and the Applicants during the above summarized interview, Brenner fails to teach or suggest gene specific tagged primers, and instead employs a method that requires the use of oligo(dT) or random tagged primers. As such, Brenner does not anticipate these claims and this rejection may be withdrawn.

Claims 1-2, 5, 6, 11 and 12 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Kamb. As discussed and agreed by the Examiner and the Applicants during the above summarized interview, Kamb fails to teach or suggest gene specific tagged primers, and instead employs a method that requires the use of oligo(dT) or random tagged primers. As such, Kamb does not anticipate these claims and this rejection may be withdrawn.

Claims 3, 4 and 7-10 have been rejected under 35 U.S.C. § 103(a) as being obvious over Brenner in view of Lockhart and Shannon. As explained above, Brenner fails to teach or suggest a method that employs gene specific tagged primers. As the supplemental references have been cited solely for the hybridization efficiency limitation, these references fail to make up the fundamental deficiency in Brenner. As such, Claims 4-9 and 12 are not obvious under 35 U.S.C. § 103(a) over Burmer in view of Lockhart and Shannon and this rejection may be withdrawn.

Finally, Claims 13-25 have been rejected under 35 U.S.C. § 103(a) over Brenner in view of Burmer, Lockhart and Shannon, and further in view of Brown. As explained above, Brenner fails to teach the basic method as claimed which requires the use of gene specific primers. The supplemental references have been cited solely for the additional elements of the claim, e.g., hybridization efficiency limitation. As such, these references fail to make up the fundamental deficiency in Burmer. Accordingly, Claims 18-27 are not obvious under 35 U.S.C. § 103(a) over Brenner in view of Burmer, Lockhart, Shannon and Brown, and this rejection may be withdrawn.

In view of the above amendments and remarks, this application is considered to be in good and proper form for allowance and the Examiner is respectfully requested to pass this application to issue.

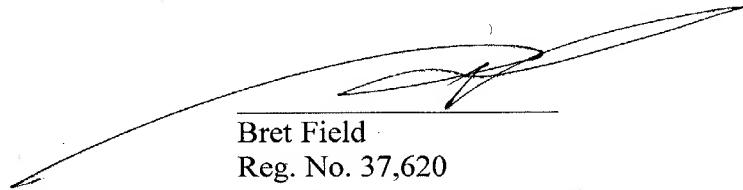
Atty Dkt. No.: CLON-017US1
USSN: 09/752,293

If, in the opinion of the Examiner, a telephonic interview would expedite prosecution of this application, the Examiner is invited to contact the undersigned at (650) 833-7770.

If the Patent Office determines that fees, including extensions of time, are required, the Applicants hereby petition for any required relief, including extensions of time, and authorize the Commissioner to charge the cost of such to our Deposit Account No. 50-0815, Order No. CLON-017US1.

Respectfully Submitted,

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